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TITLE: PEACH TREE

NAMED: 'KLAMATH'

NAMES AND ADDRESSES OF INVENTORS:

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CITIZENSHIP: All inventors are citizens of the United States of America.

BACKGROUND OF THE VARIETY:

FIELD OF THE INVENTION

In the field of plant genetics, we conduct an extensive and continuing plant-breeding program including the organization and asexual reproduction of orchard trees, and of which plums, peaches, nectarines, apricots, cherries and interspecifics are exemplary. It was against this background of our activities that the present variety of peach tree was originated and asexually reproduced by us in our experimental orchard located near Modesto, Stanislaus County, California.

PRIOR VARIETIES: Among the existing varieties of peach and nectarine trees, which are known to us, and mentioned herein, 'Carolyn' Peach (non-patented), 'Loadel' Peach (non-patented), 'Andross' Peach (non-patented) and 'Royal Giant' Nectarine (U.S. Plant Patent #4107).

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND

DEVELOPMENT: Not applicable.

1 ORIGIN OF THE VARIETY: The new and distinct variety of peach
2 tree (*Prunus persica*) was developed by us in our experimental
3 orchard located near Modesto, California, as a first
4 generation seedling from seed of a cross between proprietary
5 lines of immediate parents with field identification numbers
6 8EB258 and 40GC250. The maternal parent (8EB258) originated
7 from a first generation cross between 'Carolyn' Peach (non-
8 patented) and 'Loadel' Peach (non-patented). The paternal
9 parent (40GC250) originated from a cross between 'Royal
10 Giant' Nectarine (U.S. Plant Patent #4107) and a canning
11 cling peach of unknown parentage. We planted and maintained
12 under close and careful observation, a large number of these
13 first generation seedlings on their own root system, during
14 which time we recognized the desirable tree and fruit
15 characteristics of the present variety and selected it in
16 1989 for asexual propagation and commercialization.

17
18 ASEXUAL REPRODUCTION OF THE VARIETY: Asexual reproduction of
19 the new and distinct variety of peach tree was by budding to
20 'Nemaguard' Rootstock (non-patented), as performed by us in
21 our experimental orchard located near Modesto, California,
22 and shows that reproductions run true to the original tree
23 and all characteristics of the tree and its fruit are
24 established and transmitted through succeeding asexual
25 propagations.

26
27 SUMMARY OF THE NEW VARIETY: The new variety of peach tree is
28 of large size, vigorous, upright growth and a regular and

1 productive bearer of large size, non-melting, yellow flesh,
2 clingingstone fruit with very firm flesh, good handling and
3 shipping quality. The fruit is further characterized by
4 maturing relatively uniform throughout the tree, and
5 maintaining excellent shape, texture, color and appearance
6 after being canned. In comparison to 'Andross' Peach (non-
7 patented), the tree of the new variety has more vigor,
8 heavier production of firmer, non-melting, yellow flesh fruit
9 with greater resistance to bruising and browning, and is 1 to
10 2 days earlier in maturity. The fruit after canning has less
11 internal breakdown, is firmer with a more attractive
12 appearance.

13

14 PHOTOGRAPH OF THE VARIETY: The accompanying color
15 photographic illustration shows typical specimens of the
16 foliage and fruit of the present new peach variety. The
17 illustration shows the upper and lower surface of the leaves,
18 an exterior and sectional view of a fruit divided in its
19 suture plane to show flesh color, pit cavity and the stone
20 remaining in place. The photographic illustration was taken
21 shortly after being picked (shipping ripe) and the colors are
22 as nearly true as is reasonably possible in a color
23 representation of this type.

24

25 DESCRIPTION OF THE VARIETY: The following is a detailed
26 botanical description of the new variety of peach tree, its
27 flowers, foliage and fruit, as based on observations of 7
28

1 year old specimens grown near Modesto, California, with color
2 in accordance with Munsell Book of Color.

3 TREE

4 Size:

5 Large.
6 Pruned to 3 to 3.5 meters in
7 height at maturity for
8 economical harvesting of
9 fruit.

10 Vigor:

11 Vigorous.
12 Growth of 1.5 to 2 meters the
13 first growing season.
14 Varies with soil fertility,
15 climatic conditions and
16 cultural practices.

17 Form:

18 Upright, usually pruned to vase
19 shape.

20 Branching Habit:

21 Upright.
22 Crotch angle approximately 30°.
23 Heavy fruit production
24 increases crotch angle.

25 Productivity:

26 Productive, thinning and
27 spacing of fruit necessary
28 to develop desired
marketable size.

29 Bearer:

30 Regular, has had adequate fruit
31 set for 5 consecutive years.
32 No alternate bearing observed.

33 Fertility:

34 Self fertile.

35 Density:

36 Medium dense.
37 Usually pruned to vase shape to
38 increase sunlight and air
39 movement to center of tree.

40 Hardiness:

41 Hardy in all fruit growing
42 areas of California.

1
2 Approximate winter chilling
3 requirement 800 hours at or
4 below 45°F.
5

6 TRUNK
7

8 Size:
9

10 Large, stocky.
11 Average circumference 46.8 cm
12 measured 31.2 cm above
13 ground.
14

15 Texture:
16

17 Medium shaggy, roughness
18 increases with age.
19

20 Color:
21

22 Varies from 2.5Y 6/2 to 2.5Y
23 5/2, darkens with age.
24

25 BRANCHES
26

27 Size:
28

29 Medium.
30 Average circumference 18.2 cm
31 at 1.3 meters above ground.
32

33 Surface Texture:
34

35 New growth smooth, mature
36 growth medium rough.
37

38 Lenticels:
39

40 Average number of 22 in a 25.8
41 square cm section.
42 Average length 3.3 mm.
43 Average width 1.5 mm.
44 Color varies from 5YR 6/8 to
45 7.5YR 5/8.
46

47 Color:
48

49 Varies from 5Y 6/10 on new
50 growth to 5YR 4/8 on mature
51 growth.
52

53 LEAVES
54

55 Size:
56

57 Large.
58 Average length 136.0 mm.
59 Average width 37.3 mm.
60

61 Form:
62

63 Lanceolate.
64

1 Apex:
2 Acuminate.

3 Base:
4 Cuneate.

5 Margin:
6 Crenate.

7 Thickness:
8 Medium.

9 Surface Texture:
10 Upper surface relatively
11 smooth, slight indentations
12 over midrib and leaf veins,
13 glabrous.

14 Lower surface relatively smooth
15 with small ridges created by
16 midrib and pinnate venation,
17 glabrous.

18 Petiole:
19 Medium size.
20 Average length 9.7 mm.
21 Average width 1.5 mm.
22 Longitudinally grooved.
23 Color 2.5GY 7/8.

24 Glands:
25 Reniform.
26 Medium to large size.
27 Average length 1.0 mm.
28 Average width 0.6mm.
29 Average number 2, varies from 1
30 to 3.
31 Primarily located on upper
32 portion of petiole and base
33 of leaf blade.
34 Color varies from 2.5Y 6/6 to
35 2.5YR 6/6 on upper surface
36 of glands.

37 Color:
38 Upper surface varies from 2.5GY
39 4/4 to 5GY 5/4.
40 Lower surface varies from 2.5GY
41 6/4 to 5GY 7/6.
42 Midvein color 2.5GY 8/6.

27 FLOWER BUDS

28 Size:
29 Medium, non-showy.
30 Average length 12.6 mm.

Average diameter 6.6 mm.

Hardiness:

Hardy in all stone fruit
growing areas of California.

Form:

Plump, conical, becoming
oblongated before opening.

Pedicel:

Average length 4.2 mm.
Average width 2.0 mm.
Color 2.5GY 7/8.

Color:

Varies from 5RP 6/10 to 5RP
6/12.

FLOWERS

Size:

Medium, non-showy.
Average height 16.9 mm.
Average diameter 20.0 mm.

Petals:

Number - 5, alternately
arranged to sepals.
Shape - oblanceolate.
Average length 11.8 mm.
Average width 6.2 mm.
Margin - entire.
Color varies from 5RP 6/12 to
5RP 8/6, the outer surface
of the petals darken in
color.

Sepals:

Number - 5, alternately
arranged to petals.
Shape - triangular, apex
rounded.
Average length 4.0 mm.
Average width 3.7 mm.
Color - upper surface 10Y 5/6,
glabrous, lower surface
7.5RP 3/8, pubescent.

Stamens:

Average number per flower 43.
Average filament length 12.4
mm.

1 Filament color N 9.5/ when
2 flower first opens, becoming
3 2.5RP 6/10 as flower ages.
Color of anthers 6.25R 3/12.

4 Pollen:
5 Self fertile.
Color - 2.5Y 8/8.

6 Pistil:
7 Normally 1, varies from 1 to 2.
8 Average length 14.7 mm.
9 Surface - pubescent.
Color 2.5GY 9/6.
Stigma approximately 2.4 mm
above anthers.

10 Fragrance:
11 Slight.

12 Blooming Period:
13 Date of First Bloom
14 March 5, 2003.
Date of Petal Fall
March 14, 2003.
Varies slightly with climatic
conditions.

15 Color:
16 Varies from 5RP 8/2 to 5RP 6/2,
17 outer edges of petals much
darker in color than center
of petals.

18 Number Flowers per Flower Bud:
19 One.

20 Pedicel:
21 Average length 4.4 mm.
Average width 2.2 mm.
Color 2.5GY 7/6.

22 FRUIT

23 Maturity When Described:
24 Firm ripe.

25 Date of First Picking:
26 August 1, 2003.

27 Date of Last Picking:
28 August 6, 2003.
Varies slightly with climatic
conditions.

1 Size:
2 Large.
3 Average diameter axially 77.5
4 mm.
5 Average transversely in suture
6 plane 84.1 mm.
7 Average weight 311.7 grams,
8 average weight varies
9 slightly with fertility of
10 the soil, amount of thinning
11 and climatic conditions.

12 Form:
13 Globose.

14 Suture:
15 Nearly smooth, extends from
16 base to apex.

17 Ventral Surface:
18 Very slightly lipped.

19 Apex:
20 Varies from rounded to slight
21 tip.

22 Base:
23 Retuse.

24 Cavity:
25 Rounded to slightly elongated
26 in suture plane.
27 Average depth 6.1 mm.
28 Average breadth 11.6 mm.

19 STEM

20 Size:
21 Medium.
22 Average length 7.1 mm.
23 Average diameter 3.6 mm.

24 Color:
25 10Y 7/6.

24 FLESH

25 Ripens:
26 Evenly.

27 Texture:
28 Firm, non-melting.

1 Fibers:
2 Few, small, tender.

3 Firmness:
4 Firm flesh, higher degree of
5 firmness compared to the
standard canning peach
'Andross' (non-patented).

6 Aroma:
7 Slight.

8 Amygdalin:
9 Undetected.

10 Eating Quality:
11 Good fresh, very good canned.

12 Flavor:
13 Good, comparable to other
14 standard non-melting canning
15 peach varieties.

16 Juice:
17 Moderate.

18 Brix:
19 Average 13.7° , varies slightly
20 with amount of fruit per
21 tree and climatic
22 conditions.

23 Color:
24 Varies from 2.5Y 8/10 to 2.5Y
25 8.5/10.
26 Pit cavity 2.5Y 8/8.
27 No bleeding from pit cavity
28 into flesh.

SKIN

Thickness:
Medium.

Surface:
Smooth.

Down:
Moderate amount and length.

Tendency to Crack:
None.

1 Color:
2 Ground color varies from 2.5Y
3 8/10 to 2.5Y 8.5/10. Very
4 slight blush 7.5R 4/10 to
5 7.5R 4/12 on 1 to 5% of skin
6 surface.

7 Tenacity:
8 Tenacious to the flesh.

9 Astringency:
10 None.

11 STONE

12 Type:
13 Clingstone.

14 Size:
15 Large.
16 Average length 40.4 mm.
17 Average width 30.2 mm.
18 Average thickness 24.0 mm.

19 Form:
20 Ovoid.

21 Base:
22 Straight.

23 Apex:
24 Pointed.
25 Average length 2.1 mm.

26 Surface:
27 Irregularly furrowed toward the
28 apex, pitted throughout with
29 deeper pits toward base.
30 Pits vary from rounded to
31 elongated. Usually one long
32 furrow on each side of
33 suture.

34 Sides:
35 Unequal, with one side
36 extending further from
37 suture plane.

38 Ridges:
39 Relatively wide and slightly
40 rough.

41 Tendency to Split:
42 None.

1 Color: Varies from 5YR 5/6 to 5YR 3/6
2 when dry.
3

4 KERNAL
5

6 Form: Ovate.
7

8 Taste: Bitter.
9

10 Viability: Viable, embryo completely
11 developed.
12

13 Size: Large.
14 Average length 20.2 mm.
15 Average width 13.6 mm.
16 Average thickness 6.4 mm.
17

18 Skin: Color - 5Y 9/6 when dry.
19

20 USE
21 Canning.
22

23 KEEPING QUALITY
24 Good, held firm in cold storage 3 weeks
25 at 38° to 42°F with minimal
26 loss of firmness or internal
27 flesh breakdown.
28

29 SHIPPING QUALITY
30 Good, minimal skin scarring or bruising
31 of flesh during picking and
32 shipping trials.
33

34 PLANT/FRUIT DISEASE RESISTANCE/SUSCEPTIBILITY
35 No specific testing for
36 relative plant/fruit disease
37 resistance/susceptibility
38 has been designed. Under
39 close observation during
40 planting, growing, and
41 harvesting of fruit, under
42 normal cultural and growing
43 conditions near Modesto,
44 California, no particular
45 plant/fruit disease

resistance or susceptibility has been observed. Any variety or selection observed during indexing of plant characteristics with abnormal fungus, bacterial, virus or insect susceptibility is destroyed and eliminated from our breeding program.

The present new variety of peach tree, its flowers, foliage and fruit herein described may vary in slight detail due to climate, soil conditions and cultural practices under which the variety may be grown. The present description is that of the variety grown under the ecological conditions prevailing near Modesto, California.